

WHAT IS CLAIMED IS:

1. A network device, comprising:

a user interface to allow users to specify at least one contact device during a period of time;

5 a predictor that predicts a probability of contact the user through at least one contact device;

a first port to receive calls intended for the user;

a second port to send contact signals to at least one contact device, depending upon a user specification;

10 a processor to:

determine connection information based upon the contact device at which the user responds to the contact signal; and

transmit the connection information to the predictor to allow the predictor to update its probability predictions.

15 2. The network device of claim 1, the device further comprising a memory to store probability data.

3. The network device of claim 1, the user interface further to allow the user to select a predictive mode.

20 4. The network device of claim 1, the contact device selected from the group comprised of: pager, cellular phone, landline phone, computer, personal digital assistant, and mobile computing device.

5. The network device of claim 1, the contact signal further comprising: a phone call, a fax signal, an instant message, and a video call.

6. A method of contacting a user, comprising:

25 receiving a call for a user at a first device;

accessing user preferences for contacting the user;

predicting a probability on contacting the user by at least one contact device based upon the user preferences and previous successful contacts;
transmitting a contact signal to the at least one device having the highest probability;
determining the success or failure of the signal; and
5 updating probability data used in the predicting.

7. The method of claim 6, receiving a call further comprising receiving one of the group comprised of: a phone call, a fax signal, an instant message and a video call.

8. The method of claim 6, accessing user preferences further comprising accessing an indicator for predictive routing.

10 9. The method of claim 6, accessing user preferences further comprising accessing a list of user preferences for a particular time period.

10. The method of claim 6, accessing user preferences further comprising accessing a list of user preferences and an indicator for predictive routing.

11. The method of claim 6, predicting a probability further comprising applying Bayes's
15 Theorem to the contact devices.

12. The method of claim 6, transmitting a contact signal further comprising transmitting one of the group comprised of: a phone call, a fax signal, an instant message or a video call.

13. The method of claim 6, determining the success or failure further comprising determining at what device the user responds to the signal.

20 14. The method of claim 6, updating the probability data further comprising raising the probability of a device at which the user responds to the call.

15. The method of claim 6, updating the probability data further comprising:

determining that a success rate is below a failure threshold after a predetermined period of time; and

25 querying the user to either enter a broadcast system, or choose a best mode of prediction.

16. The method of claim 6, updating the probability data further comprising:

determining that a success rate is above a success threshold; and
ordering a probability for each contact device based upon past successes.

17. The method of claim 6, transmitting a contact signal further comprising:

5 determining a first set of contact devices having a probability of success within a
predetermined range; and
sending multiple contact signals to contact devices in the first set in parallel; and
if no success occurs, determining a next set of contact devices having a probability of
success within a next range.

10 18. The method of claim 17, the method further comprising repeating the determining and
sending processes until a success occurs.

19. The method of claim 17, the method further comprising altering the ranges depending
upon successes.

20. A network device, comprising:

15 a means for allowing users to specify at least one contact device during a period of
time;
a means for predicting a probability of contact the user through at least one contact
device;
a means for receiving calls intended for the user;
20 a means for sending contact signals to at least one contact device, depending upon a
user specification;
a means for:
determining connection information based upon the contact device at which the
user responds to the contact signal; and
25 transmitting the connection information to the predictor to allow the predictor to
update its probability predictions.

21. The network device of claim 20, the device further comprising a means for storing probability data.

22. An article of machine-readable code containing instructions that, when executed, cause the machine to:

5 receive a call for a user at a first device;
access user preferences for contacting the user;
predict a probability on contacting the user by at least one contact device based upon the user preferences and previous successful contacts;
transmit a contact signal to the at least one device having the highest probability;
10 determine the success or failure of the signal; and
update probability data used in the predicting.

23. The article of claim 22, the code causing the machine to update the probability data further causing the machine to:

15 determine that a success rate is below a failure threshold after a predetermined period of time; and
query the user to either enter a broadcast system, or choose a best mode of prediction.

24. The article of claim 22, the code causing the machine to update the probability data further causing the machine to:

20 determining that a success rate is above a success threshold; and
ordering a probability for each contact device based upon past successes.

25. The article of claim 22, the code causing the machine to update the probability data further causing the machine to transmit a contact signal further comprising:

25 determine a first set of contact devices having a probability of success within a predetermined range;
send multiple contact signals to contact devices in the first set in parallel; and

if no success occurs, determine a next set of contact devices having a probability of success within a next range.